

comparison was applied to compare entecavir with interferon and the combination of interferon and lamivudine. When compared with lamivudine, the combination of interferon and lamivudine yielded the best efficacy which was about two times more likely to increase HBeAg seroconversion rate (OR = 2.38, 95% CI = 1.21–4.06) than entecavir (OR = 0.98, 95% CI = 0.56–1.44) and interferon (OR = 1.17, 95% CI = 0.44–2.24). In addition, when compared with either interferon or entecavir, interferon plus lamivudine was about two to three times more likely to enhance HBeAg seroconversion rate with the OR of 2.48 (95% CI = 1.05–4.92) or 2.71 (95% CI = 1.13–5.33), respectively. **CONCLUSIONS:** There was a significant increase in HBeAg seroconversion rate in patients with HBeAg positive CHB receiving the combination of interferon and lamivudine compared with lamivudine, entecavir and interferon.

**PG13**

#### **EFFECTIVENESS AND COST ANALYSIS OF PARENTERAL REGIMEN IN CRITICAL ILLNESS PATIENTS OF POSTOPERATIVE-THREE-COMPARTMENT BAG SYSTEM AND TRADITIONAL SEPARATE BOTTLE SYSTEM**

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**OBJECTIVES:** To evaluate clinical outcome and direct medical cost using Kabiven and traditional peripheral parenteral nutrition for postoperative patients in ICU. **METHODS:** This is a retrospective study. Medical records of postoperative patients in ICU were reviewed by clinical pharmacists from July 2008 to July 2009. The retrieved patients were divided into two groups, kabiven group (n = 49) and separate bottle group (SB) (n = 50). Patients' characteristics were evaluated and compared between two groups. The measured outcomes were the clinical effectiveness and direct medical costs. One way ANOVA were used for analysis. **RESULTS:** There were no statistically significance difference in patients' characteristics between two groups. Survival rate was higher in kabiven group than in SB group (40% vs. 31%, respectively). The length of stay in hospital in kabiven group was longer than in SB group (47.51 ± 38.63 vs. 31.86 ± 21.99 days, respectively;  $P < 0.015$ ). Total direct medical costs of survivors in kabiven group was more expensive than in SB group (\$11,976.9 vs. \$9574.9, respectively). **CONCLUSIONS:** Although the direct medical cost of kabiven group were higher than SB group, use of kabiven is likely to improve mortality rate of postoperative patients in ICU.

#### **GASTROINTESTINAL DISORDERS – Cost Studies**

**PG14**

#### **BUDGET IMPACT ANALYSIS OF ORAL ANTIVIRAL AGENTS FOR THE TREATMENT OF CHRONIC HEPATITIS B IN SOUTH KOREA**

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**OBJECTIVES:** Hepatitis B is prevalent in South Korea and chronic hepatitis B (CHB) infection is an important public health issue due to its potential to evolve to cirrhosis, hepatocellular carcinoma. This study estimated the direct medical cost of CHB-related disease states in South Korea and compared the cost of South Korea with that of USA, Australia and China. It also aimed to analyze the impact of three therapeutic alternatives for CHB by Budget Impact Analysis (BIA). **METHODS:** Dynamic budget impact analysis was conducted based on a Markov model for 5 years. Three treatment scenarios were selected as follows: first-line treatment of lamivudine, second-line combination treatment of lamivudine and adefovir on the development of drug resistance, first-line treatment of lamivudine, second-line treatment of entecavir 1.0 mg on the development of drug resistance, first-line treatment of entecavir 0.5 mg, second-line treatment of adefovir on the development of drug resistance, no treatment available. **RESULTS:** The BIA results of scenario A, B, C and no treatment were 75, 74.7, 85.9, and 48.1 billion Korean Won (KRW), respectively. The results were relatively insensitive to the TP and sensitive to the number of treated patients based on sensitivity analyses. The costs of annual direct medical costs in South Korea were 23.2%–65.8%, 16.2%–59.1%, and 75.8%–381.7% of the annual direct medical costs in the United States, Australia, and China. **CONCLUSIONS:** Scenario C (first-line treatment of entecavir 0.5 mg, second-line treatment of adefovir) was found to be 10.9–11.2 billion KRW more expensive than scenario A and B from payer's perspective. In South Korea, the direct medical costs of CHB-related diseases are cheaper than the United States and Australia. It suggests that such factors as the difference of GNP (Gross National Product), health-care system and others contribute to the difference of the direct medical costs.

**PG15**

#### **EVALUATION OF OCTREOTIDE COST AFTER PHARMACEUTICAL CARE IMPLEMENTATION AT SURGICAL WARD**

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**OBJECTIVES:** Our objective was to compare cost saving before and after pharmaceutical care implementation and Octreotide use evaluation at surgical ward. **METHODS:** This study was conducted during October 1, 2008 to April 30, 2009. The research instruments were octreotide use criteria with approval by surgical staffs. Pharmacist reviewed and evaluated the medical chart in order to identify medication related problems by focusing on medication regimens. Medication related problems were classified into three categories: inappropriate route, inappropriate duration and inappropriate

indication of administration. Cost saving was based on drug costs. The pre- and post-pharmaceutical care implementation and octreotide use evaluation results were compared and analyzed with descriptive retrospective statistics and paired *t*-test at 95 % significant level. **RESULTS:** There were 302 patients received Octreotide. One hundred ninety-three patients (63.9%) were prescribed Octreotide appropriately. Medication related problems were found in 109 patients (36.1%). The most frequent problems were inappropriate duration (44.95%), inappropriate indication (34.86%) and inappropriate route of administration (20.18%). The cost of Octreotide use for inappropriate duration, inappropriate indication and inappropriate route of administration were significantly decreased after pharmaceutical care implementation 3,062,160 versus 1,946,400 baht, 657,000 versus no money, and 919,800 versus 226,800 baht, respectively ( $P < 0.005$ ). The total cost of Octreotide use was 9,529,950 baht reducing to 7,015,008 baht after pharmaceutical care implementation with statistically significant ( $P < 0.005$ ). **CONCLUSIONS:** The implementation of pharmaceutical care and evaluation of Octreotide use resulted in significant cost saving. The drug utilization program, consisting of deriving quality criteria for prescribing, structured order form and good cooperation between physicians and pharmacists with strong support of the therapeutics committee, was an effective strategic approach to promote rational drug use and develop Octreotide use guidelines.

#### **GASTROINTESTINAL DISORDERS – Patient-Reported Outcomes Studies**

**PG17**

#### **THE EFFECT OF ANTIVIRAL THERAPY ON QUALITY OF LIFE IN CHRONIC HEPATITIS PATIENTS: A SYSTEMATIC REVIEW**

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**OBJECTIVES:** Chronic viral hepatitis B and C are treated primarily with interferon (IFN) and/or nucleotide analogs e.g., ribavirin (RBV) which produced sustained viral response in more than 50% of treated patients. However, the combination may also cause numerous side effects that could reduce patients' quality of life (QoL). To determine the effect of antiviral therapy on QoL of chronic hepatitis patients. **METHODS:** Key words were "Quality of life" AND "chronic hepatitis" AND "antiviral therapy," "lamivudine," "ribavirin," "adefovir," "entecavir," "telbivudine" and were searched from PubMed and EMBASE database. Study selection criteria were original articles in which patients received antivirals for chronic hepatitis B or C, and assessed QoL. The comparators were no treatment, placebo or at least one other antiviral. Studies that involved co-HIV infection were excluded. One independent researcher reviewed titles and abstracts to determine relevance. Study design, dose, duration, baseline values, and QoL scores were extracted. **RESULTS:** Six studies met all the criteria. Four QoL instruments were used in those studies. SF 36 and HQLQ questionnaires were the most common. Patients who received peginterferon-2a plus placebo reported better QoL than peginterferon-2a plus ribavirin during the treatment (week 2–48) in two RCTs. However, the results were less consistent and less prominent during the week of 72 and 96. The effect seemed to be non-dose related. One RCT showed that interferon  $\mu$  plus ribavirin produced better QoL than untreated when measured with EQ 5D questionnaire, but it did not reach statistical significance. In similarly, peginterferon  $\mu$ -2a plus ribavirin did not showed a significant better Fatigue severity scale at week 72 when compared with peginterferon-2a plus placebo. **CONCLUSIONS:** Antiviral therapy (interferon plus ribavirin) reduced QoL only during the treatment. Results seemed to be consistent across all four types of QoL questionnaires.

#### **GASTROINTESTINAL DISORDERS – Health Care Use & Policy Studies**

**PG18**

#### **ANTIBIOTIC PRESCRIBING PRACTICES OF PRIMARY CARE PRESCRIBERS FOR DIARRHEA IN NEW DELHI, INDIA**

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**OBJECTIVES:** This study was conducted to obtain information on current prescribing rates of antibiotics in diarrhea, a condition where misuse of antibiotics is common. In the absence of community-based databases on antibiotic use in developing countries recently a methodology was established for surveillance of antibiotic use at New Delhi by conducting 'Exit Interviews' of the patients. **METHODS:** Antibiotic use data was collected from public and private sector facilities from four residential localities around a tertiary care hospital where the antibiotic resistance work was being conducted. All the 10 public sector facilities (eight primary and two secondary health cares) situated in the study area under Delhi government were enrolled. For private sector, 20 willing and cooperative general practitioners and specialists practicing in the chosen areas were selected. Patients after consultation with prescriber were asked if they had diarrhea but without blood. Patients with diarrhea were enrolled for exit interview and his/her prescription was monitored. Antibiotic use data was collected per month over 1 year (December 2007–November 2008). The percentage of patients receiving antibiotic and pattern of consumption for various antibiotics was analyzed. **RESULTS:** At public facilities 43% (171/398) and at private facilities 69% (76/110) of patients with diarrhea were prescribed at least one antibiotic. Main antibiotic class that was prescribed in public and private sector was fluoroquinolones (89% and 94%);